LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously presented) A titanium aluminide (Ti-Al) alloy honeycomb panel structure prepared by a diffusion brazing method comprising:

(a) providing Ti-Al alloy honeycomb core having a faying surface and at least one Ti-Al alloy facing sheet having a faying surface;

(b) contacting said honeycomb core faying surface and said at least one facing sheet faying surface, and positioning therebetween a metal braze filler foil containing copper, titanium, zirconium and optionally nickel, to form a braze assembly;

(c) subjecting said braze assembly to sufficient positive pressure to maintain position and alignment for joining, and

(d) heating said braze assembly for a sufficient amount of time to join said honeycomb core with said at least one facing sheet.

2. (Original) The structure of claim 1, wherein said Ti-Al alloy of said honeycomb core and of said at least one facing sheet is γ-Ti-Al.

3. (Original) The structure of claim 1, wherein said Ti-Al alloy of said honeycomb core is orthorhombic Ti-Al and said Ti-Al alloy of said at least one facing sheet is γ-Ti-Al.

4. (Original) The structure of claim 1, wherein said Ti-Al alloy of said honeycomb core and of said at least one facing sheet is orthorhombic Ti-Al.

5. (Original) The structure of claim 1, wherein said metal foil further comprises nickel.

6. (Original) The structure of claim 5, wherein said metal foil further comprises zirconium.

7. (Original) The structure of claim 1, wherein said metal foil has a thickness of about 0.0008 to about 0.006 inches.

8. (Original) The structure of claim 7, wherein said metal foil has a thickness of about 0.002 inches.

9. (Original) The structure of claim 1, wherein said metal foil is formed by a rapid solidification process or a melt spinning process.

10. (Original) The structure of claim 1, wherein said braze assembly is heated at a temperature between 1700 °F and 2200 °F.

11. (Original) The structure of claim 1, wherein said amount of time is between 1 and 150 minutes.

12. (Original) The structure of claim 1, wherein said braze assembly is heated in a vacuum furnace.

13. (Original) The structure of claim 2, wherein said at least one facing sheet has a thickness of about 0.007 to about 0.040 inches and said core is fabricated from γ-Ti-Al foil gauges having a thickness of about 0.004 inches.

14. (Original) The structure of claim 3, wherein said core is fabricated from orthorhombic Ti-Al foil gauges which have a thickness of about 0.003 inches.

15. (Original) The structure of claim 4, wherein said core is fabricated from orthorhombic Ti-Al foil gauges which have a thickness of about 0.003 inches.

16. (Previously presented) A diffusion brazing method comprising:

(a) providing a Ti-Al alloy honeycomb core having a faying surface and at least one Ti-Al alloy facing sheet having a faying surface;

(b) contacting said honeycomb core faying surface and said at least one facing sheet faying surface, and positioning therebetween a metal braze filler foil containing copper, titanium, zirconium and optionally nickel, to form a braze assembly;

(c) subjecting said braze assembly to sufficient positive pressure to maintain position and alignment for joining; and

(d) heating said braze assembly for a sufficient amount of time to join said honeycomb core with said at least one facing sheet to form a titanium aluminide structure.

17. (Original) The method of claim 16, wherein said Ti-Al alloy of said honeycomb core and of said at least one facing sheet is γ-Ti-Al.

18. (Original) The method of claim 16, wherein said Ti-Al alloy of said honeycomb core is orthorhombic Ti-Al and said Ti-Al alloy of said at least one facing sheet is γ-Ti-Al.

19. (Original) The method of claim 16, wherein said Ti-Al alloy of said honeycomb core and of said at least one facing sheet is O-Ti-Al.

20. (Original) The method of claim 16, wherein said metal foil further comprises nickel.

21. (Original) The method of claim 20, wherein said metal foil further comprises zirconium.

22. (Original) The method of claim 16, wherein said metal foil has a thickness of about 0.0008 to about 0.006 inches.

23. (Original) The method of claim 16, wherein said metal foil has a thickness of about 0.002 inches.

24. (Original) The method of claim 16, wherein said metal foil is formed by a rapid solidification process or a melt spinning process.

25. (Original) The method of claim 16, wherein said braze assembly is heated at a temperature between 1700 °F and 2200 °F.

26. (Original) The method of claim 16, wherein said amount of time is between 1 and 150 minutes.

27. (Original) The method of claim 16, wherein said braze assembly is heated in a vacuum furnace.

28. (Original) The method of claim 17, wherein said at least one facing sheet has a thickness of about 0.007 to about 0.040 inches and said core is fabricated from γ-Ti-Al foil gauges having a thickness of about 0.004 inches.

29. (Original) The method of claim 18, wherein said core is fabricated from orthorhombic Ti-Al foil gauges which have a thickness of about 0.003 inches.

30. (Original) The method of claim 19, wherein said core is fabricated from orthorhombic Ti-Al foil gauges which have a thickness of about 0.003 inches.

31. (Previously presented) A titanium aluminide (Ti-Al) alloy honeycomb panel structure prepared by a diffusion brazing method comprising:

(a) providing an orthorhombic Ti-Al alloy honeycomb core having a faying surface and at least one Ti-Al alloy facing sheet having a faying surface;

(b) contacting the honeycomb core faying surface and the at least one facing sheet faying surface, and positioning therebetween a metal braze filler foil containing copper, titanium, and optionally nickel, to form a braze assembly;

(c) subjecting the braze assembly to sufficient positive pressure to maintain position and alignment for joining; and

(d) heating the braze assembly for a sufficient amount of time to join the honeycomb core with the at least one facing sheet.

32. (Previously presented) A diffusion brazing method comprising:

(a) providing an orthorhombic Ti-Al alloy honeycomb core having a faying surface and at least one Ti-Al alloy facing sheet having a faying surface;

(b) contacting the honeycomb core faying surface and the at least one facing sheet faying surface, and positioning therebetween a metal braze filler foil containing copper, titanium, and optionally nickel, to form a braze assembly;

(c) subjecting the braze assembly to sufficient positive pressure to maintain position and alignment for joining; and

(d) heating the braze assembly for a sufficient amount of time to join the honeycomb core with the at least one facing sheet to form a titanium aluminide structure.

33. (Previously presented) The structure of Claim 31, wherein the Ti-Al alloy of the at least one facing sheet is selected from the group consisting of orthorhombic Ti-Al and γ-Ti-Al.

34. (Previously presented) The method of Claim 32, wherein the Ti-Al alloy of the at least one facing sheet is selected from the group consisting of orthorhombic Ti-Al and γ-Ti-Al.